

Selective vulnerability of brain regions in Alzheimer's disease

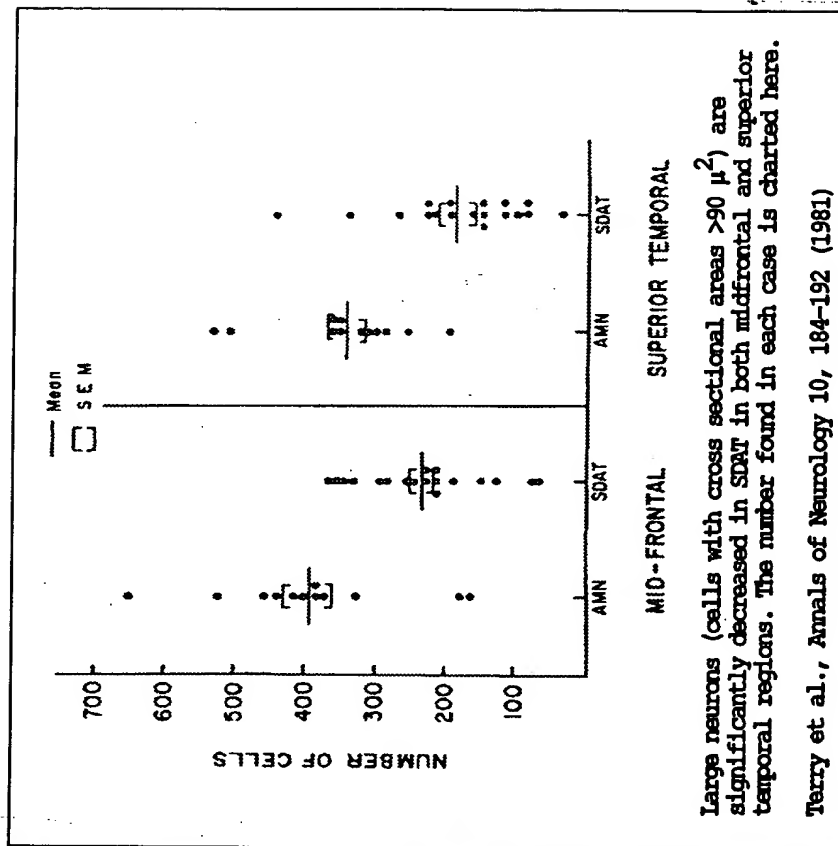
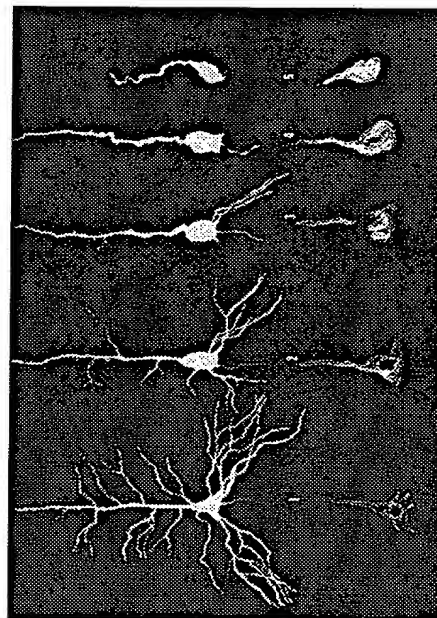
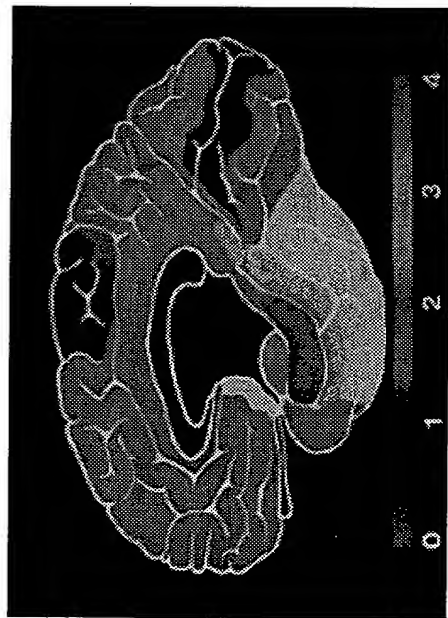


Figure 1

Identification of genes differentially expressed in AD brain regions

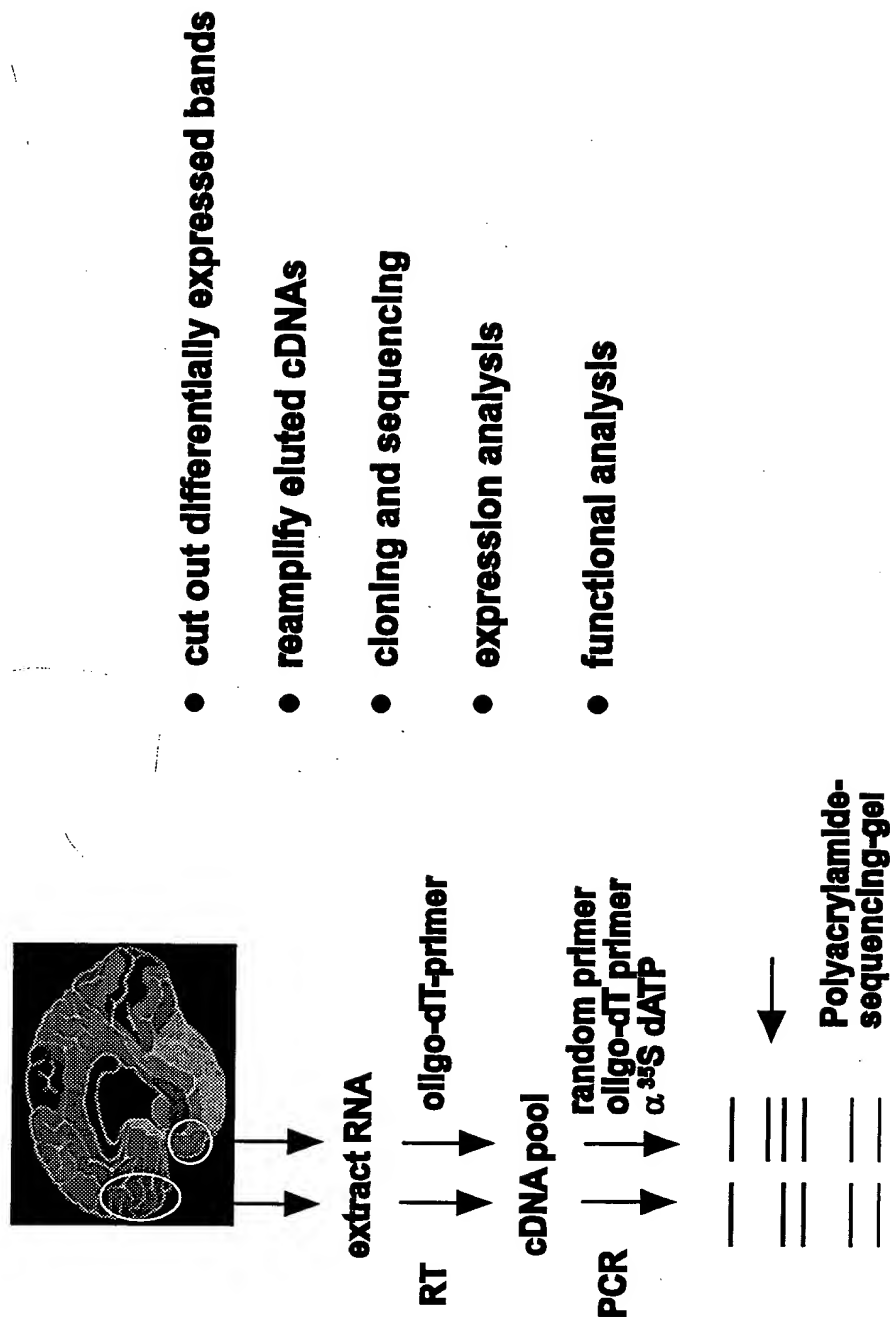


Figure 2

Identification of genes differentially expressed in AD brain regions

Material: AD brain tissue

post mortem time intervall <6h

2 different regions histologically characterized

- inferior temporal lobe
- frontal cortex

Method: mRNA differential display screen

Figure 3

Expression of Seladin-1 in AD brain

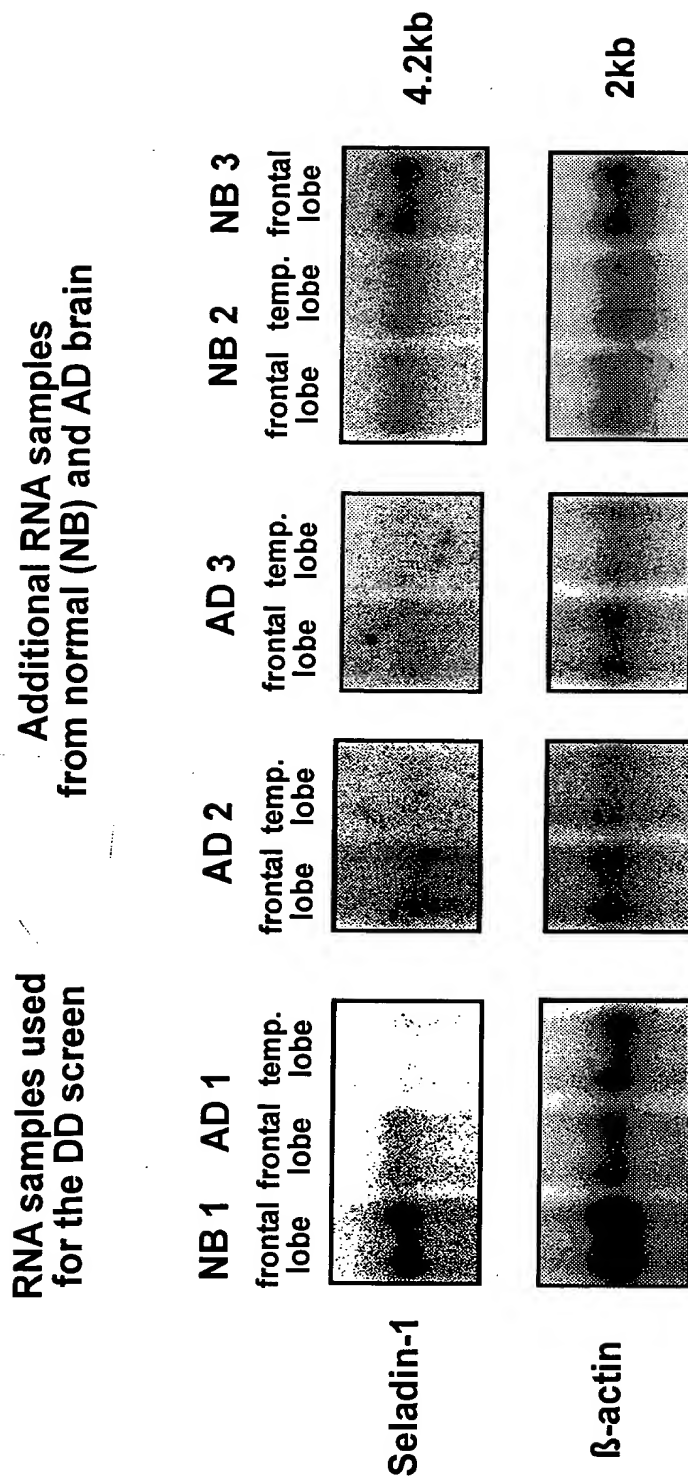


Figure 4

Expression of Seladin-1 in different human brain regions

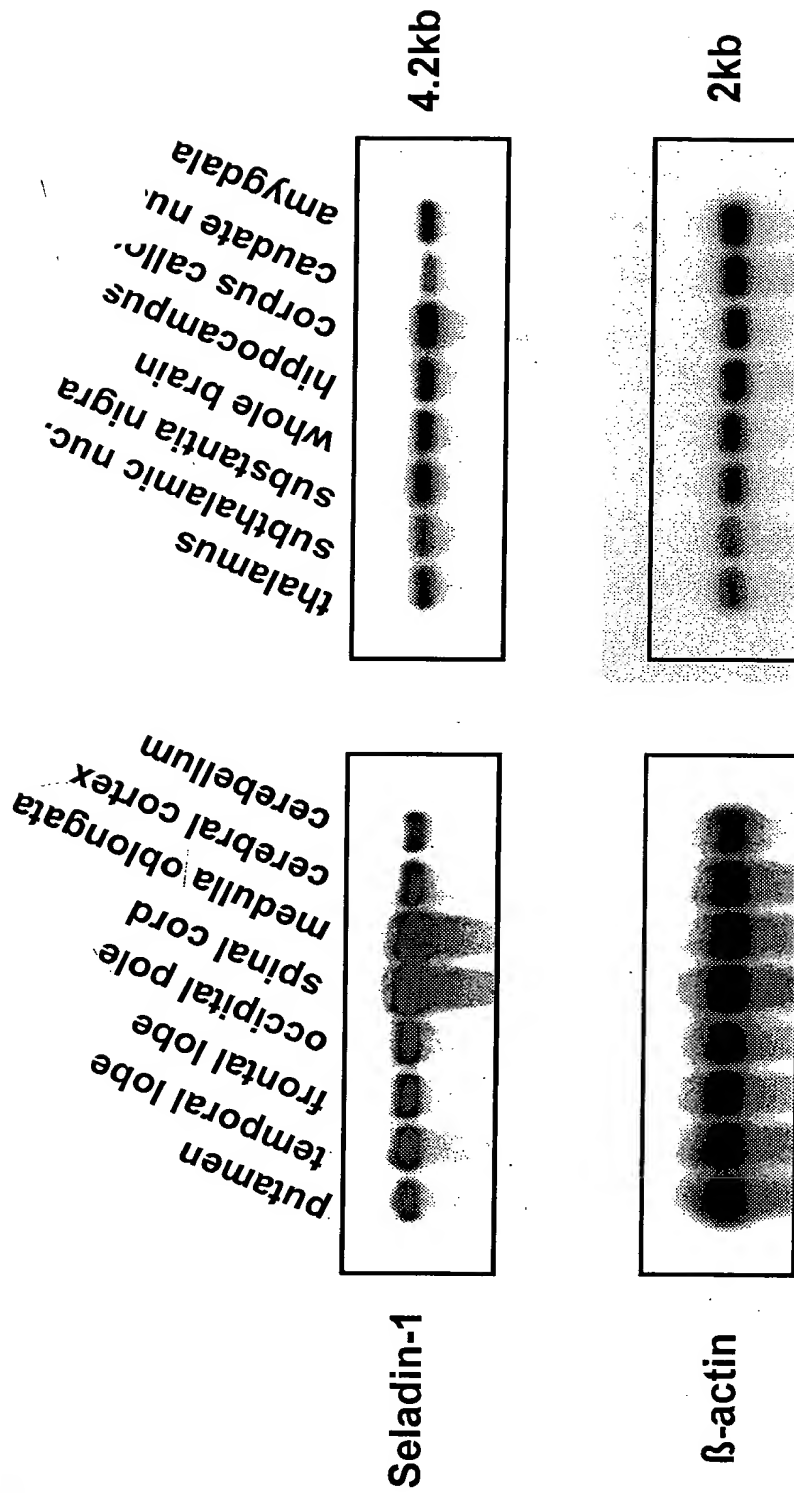
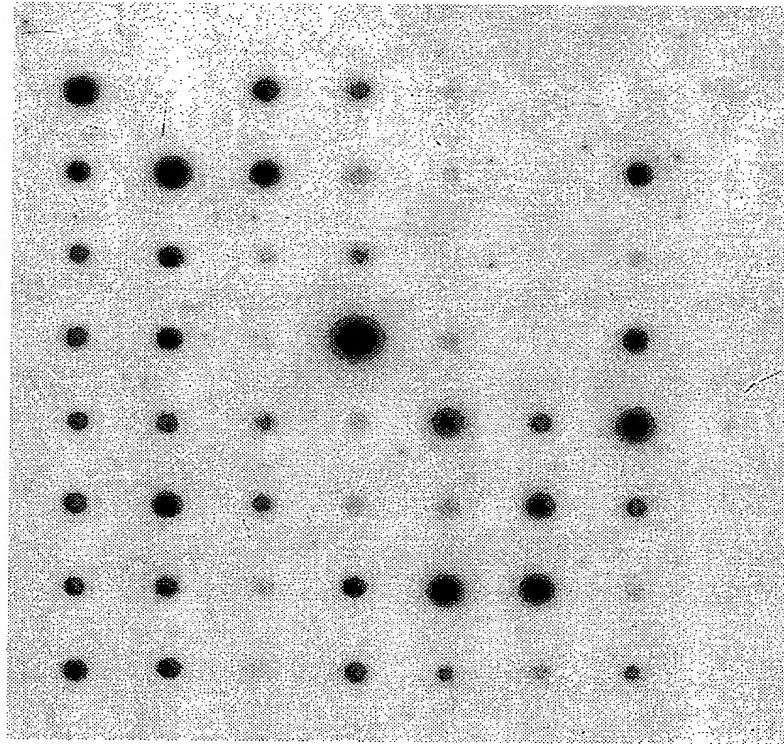


Figure 5

Expression of Seladin-1 in human tissues



whole brain	amygdala	caudate nucleus	cerebellum	cerebral cortex	frontal lobe	hippocampus	medulla oblongata
occipital lobe	putamen	substantia nigra	temporal lobe	thalamus	sub-thalamic nucleus	spinal cord	
heart	aorta	skeletal muscle	colon	bladder	uterus	prostate	stomach
testis	ovary	pancreas	pituitary gland	adrenal gland	thyroid gland	salivary gland	mammary gland
kidney	liver	small intestine	spleen	thymus	peripheral leukocyte	lymph node	bone marrow
appendix	lung	trachea	placenta				
fetal brain	fetal heart	fetal kidney	fetal liver	fetal spleen	fetal thymus	fetal lung	
yeast total RNA 100ng	yeast tRNA 100ng	E. coli rRNA 100ng	E. coli DNA 100ng	Poly r(A) 100ng	human CotDNA 100ng	human DNA 100ng	human DNA 500ng

Figure 6

Expression of Seladin-1 in rat brain

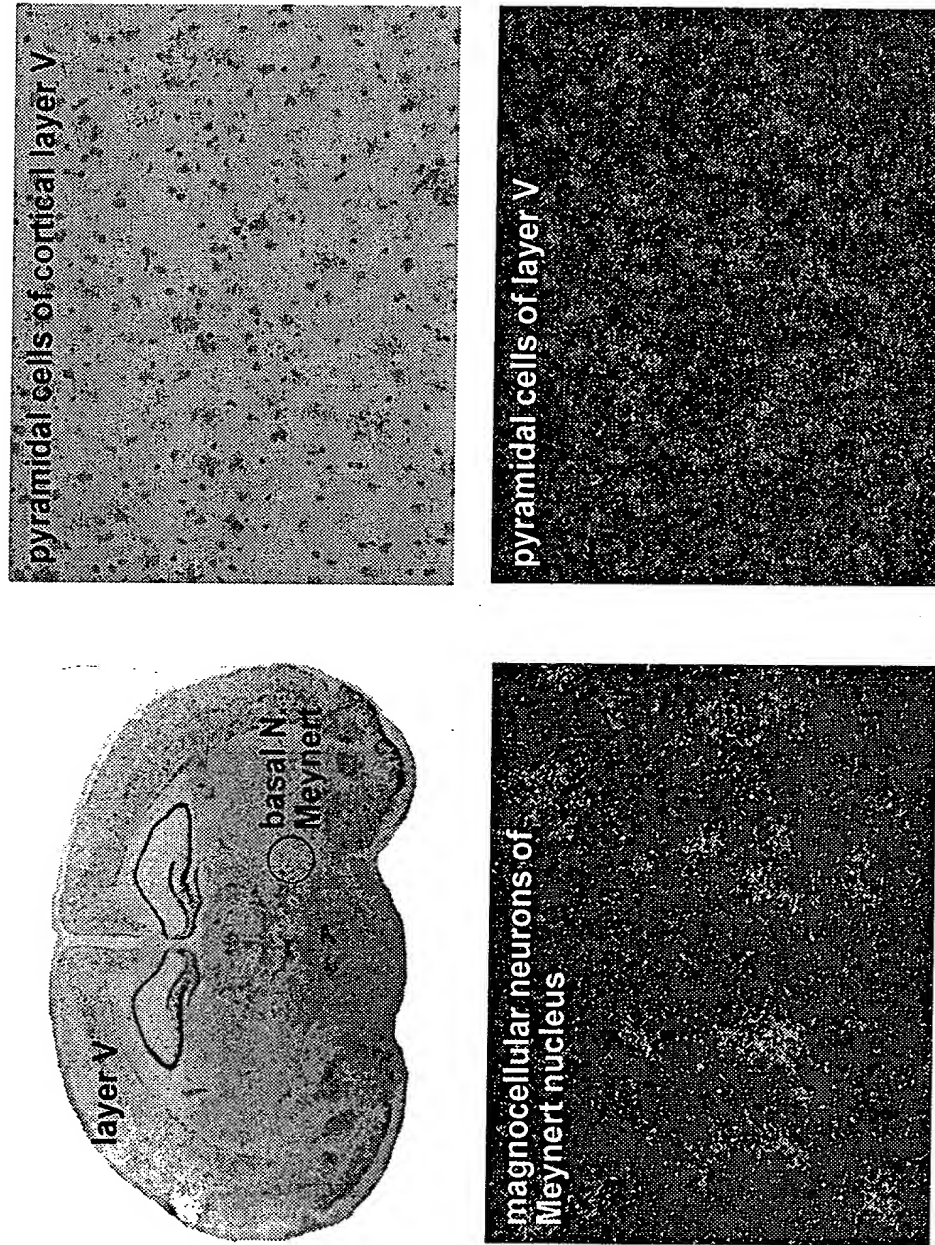
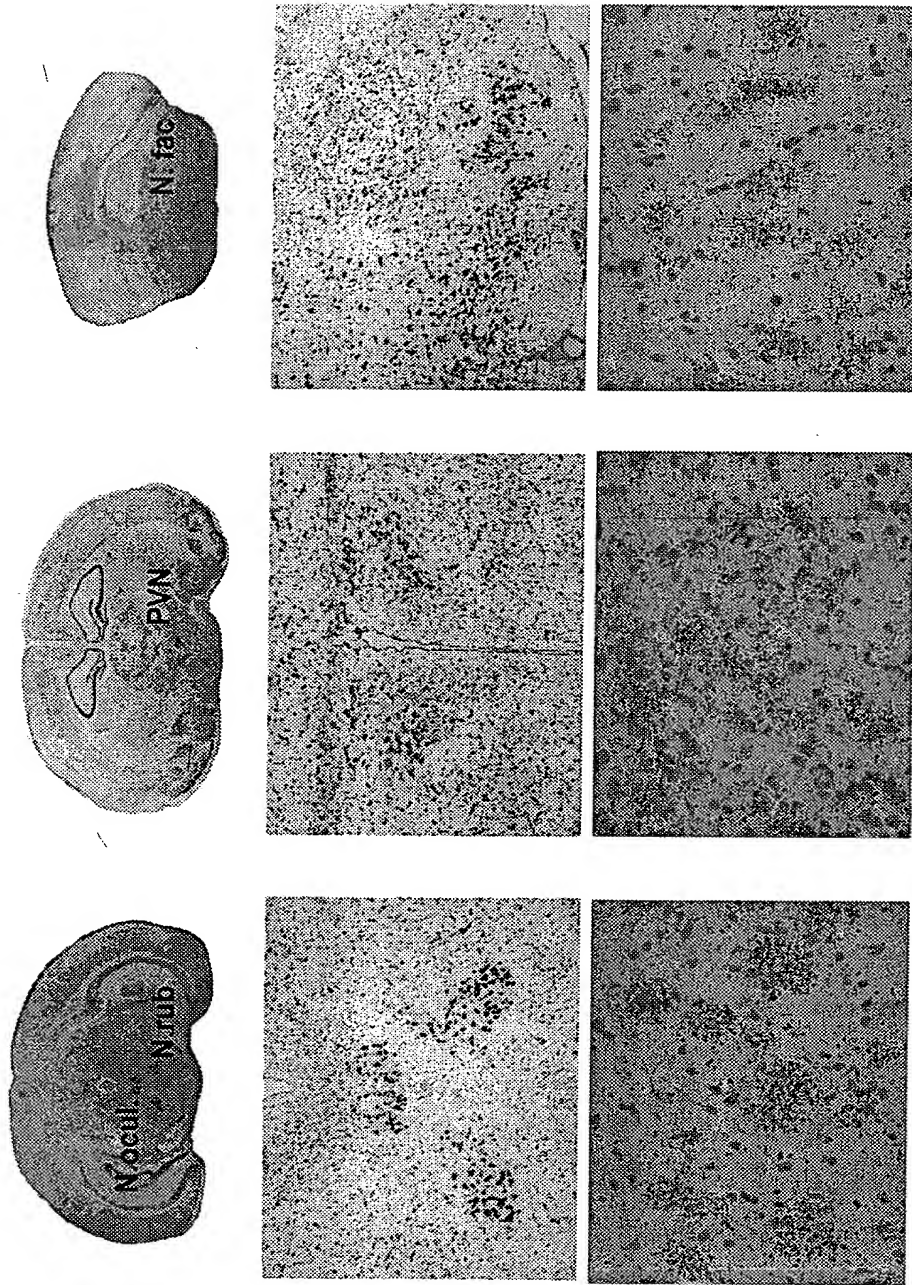


Figure 7

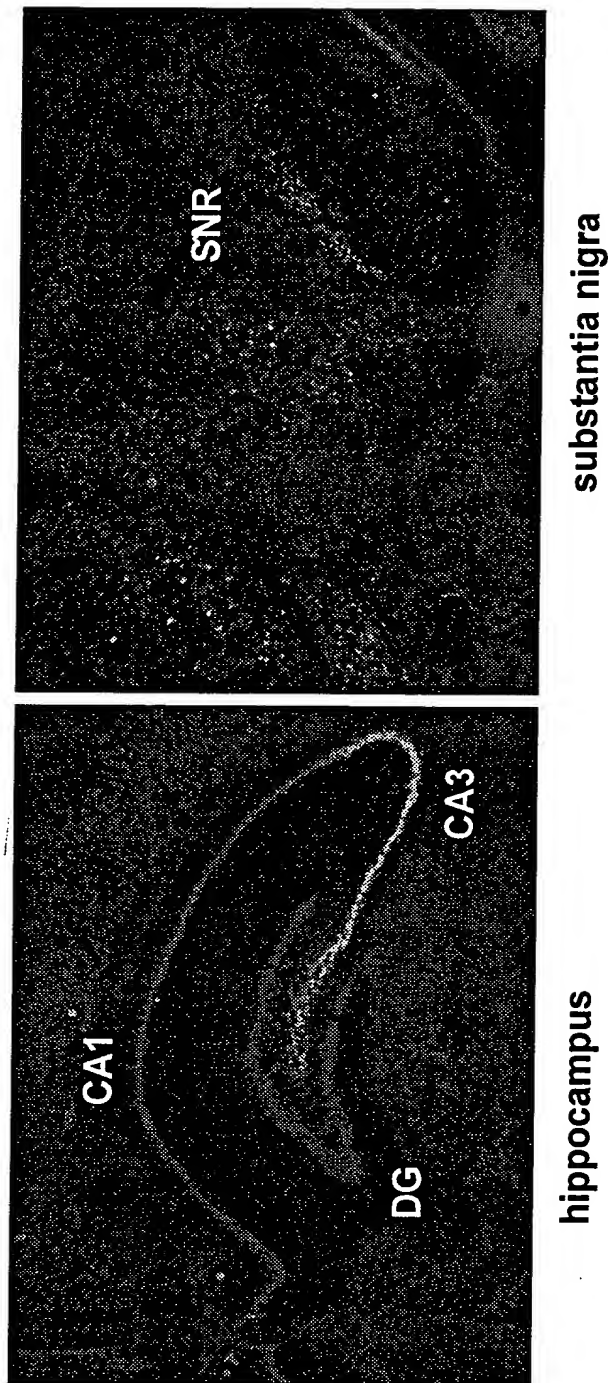
Expression of Seladin-1 in rat brain



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Figure 8

Expression of Seladin-1 in rat brain



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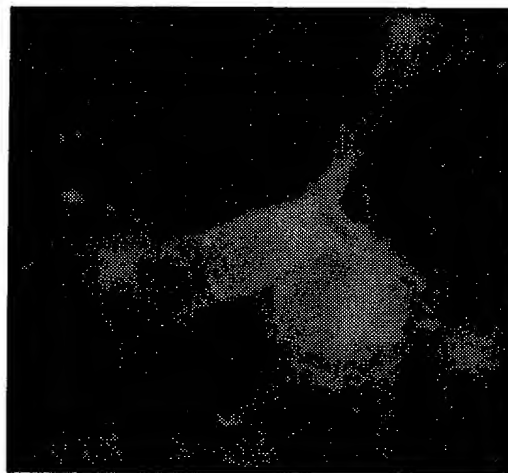
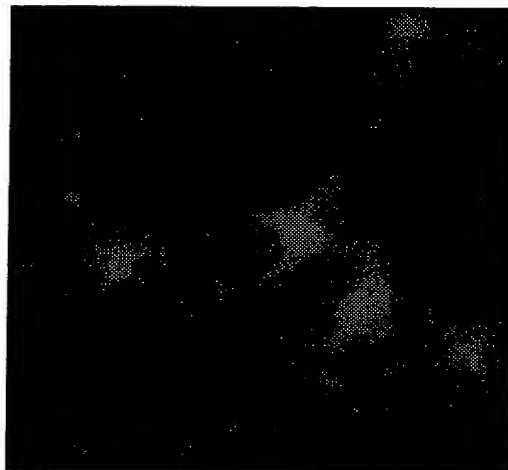
Figure 9

Subcellular localization of Seladin-1 EGFP fusionprotein

Seladin-1-EGFP

Golgi stain
BODIPY TR ceramide

overlay



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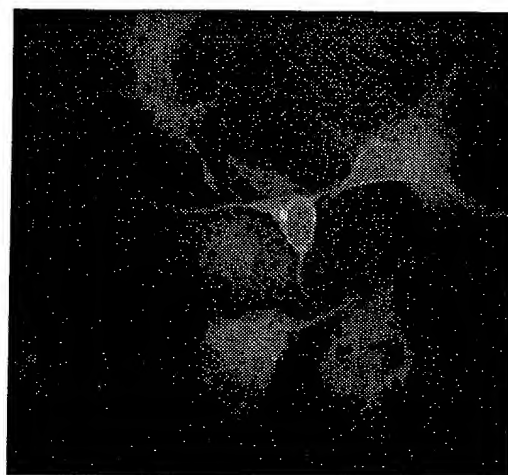
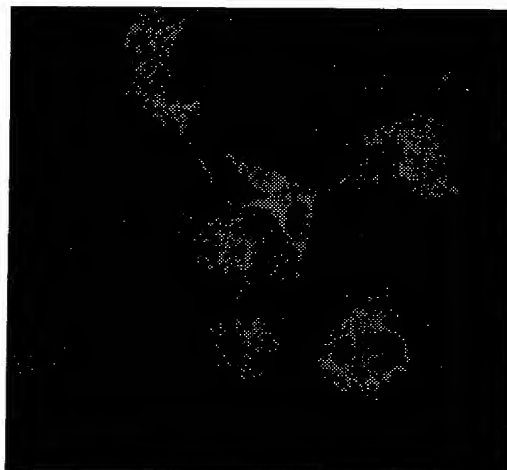
Figure 10

Subcellular localization of Seladin-1 EGFP fusionprotein

Seladin-1-EGFP

Mitochondrial stain
MitoTracker Red CM-H2XRos

overlay



Multiple sequence alignments and secondary structure prediction of Seladin-1

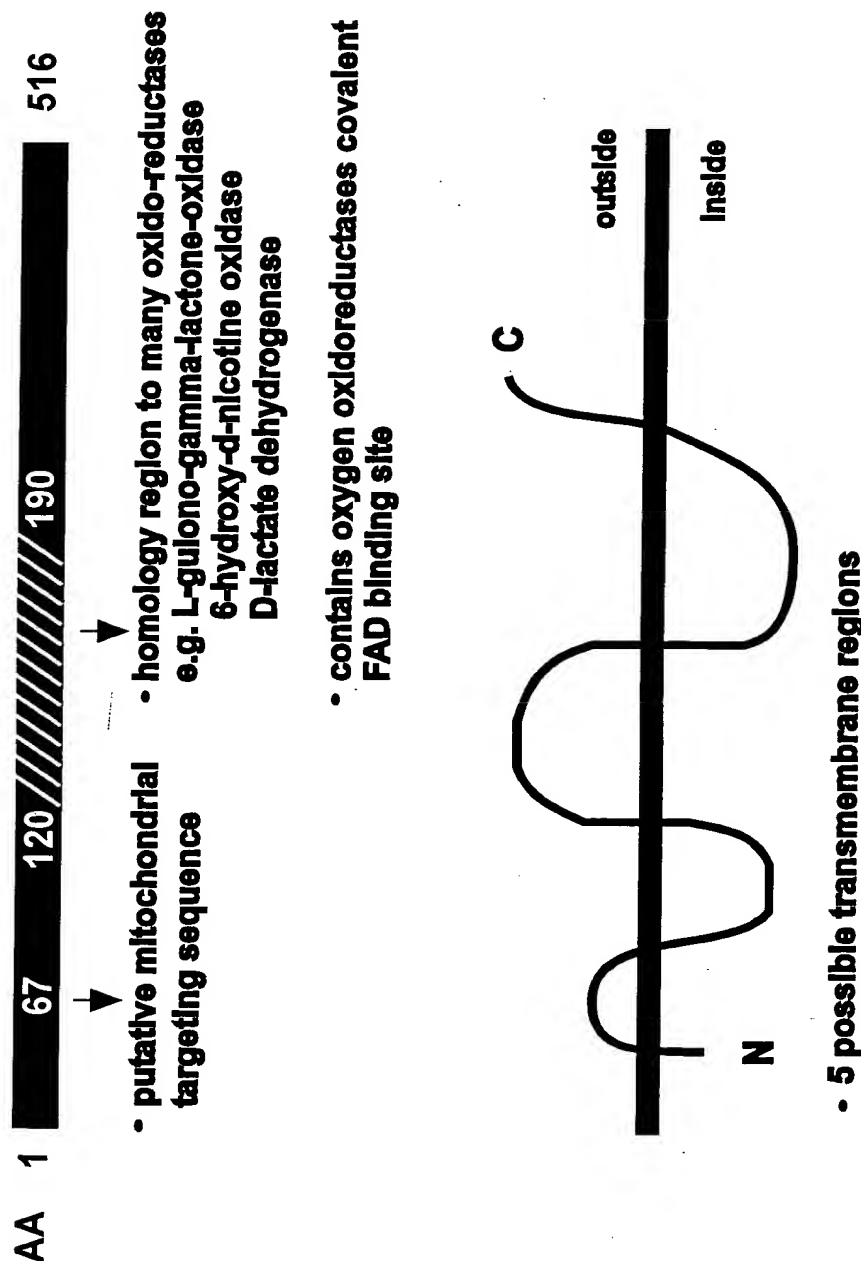


Figure 12

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FIGURE 13: SEQ ID NO.1**Seladin-1 amino acid sequence**

Seladin-1.orf Length: 516 May 29, 1998 14:51 Type: P
Check: 1354 ..

1 MEPAVSLAVC ALLFLLWVRL KGLEFVLIHQ RWVFVCLFLL PLSLIFDIYY
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101 SLRVGKYKKT HKNIMINLMD ILEVDTKKQI VRVEPLVTMG QVTALLTSIG
151 WTLPLPELD DLTVGGLIMG TGISSSHKY GLFQHICTAY ELVLADGSFV
201 RCTPSENSDL FYAVPWSCGT LGFLVAAEIR IIPAKKYVKL RFEPVRGLEA
251 ICAKFTHESQ RQENHFVEGL LYSLDEAVIM TGVMTDEAEP SKLNSIGNYY
301 KPWFVKHVEN YLKTNREGLE YIPLRHYYHR HTRSIFWELQ DIIPFGNNPI
351 FRYLFGWMVP PKISLLKLTQ GETLRKLYEQ HHVVQDMLVP MKCLQQALHT
401 FQNDIHVYPI WLCPFILPSQ PGLVHPKGNE AELYIDIGAY GEPRVKHFEA
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501 DAFPEVYDKI CKAARH

003454-1030

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FIGURE 14: SEQ ID NO.2***Seladin-1* cDNA sequence**

Seladin-1 Length: 4248 April 28, 1998 14:10 Type: N Check: 8184 ..

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09831754.40404

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FIGURE 15 CDNA sequence comparison **KIAA0018/Seladin-1**

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Fig. 16

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 101 SLRVGKYKKT HKNIMINIMD * ILEVDTKKQI VRVEPLVTMG QVTALTTSIG
 151 WTLPLPELD DLTVGGLIMG TGISSSHKY GLFQHICTAY ELVLADGSFV
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 351 FRYLFQWMP PKISLLKLTQ GETLRKLYEQ * HHVVQDMLVP MKCLQALHT
 401 FQNDIHVYPI WLCPFILPSQ PGLVHPKGNE AELYIDIGAY GEPRVKHFEA
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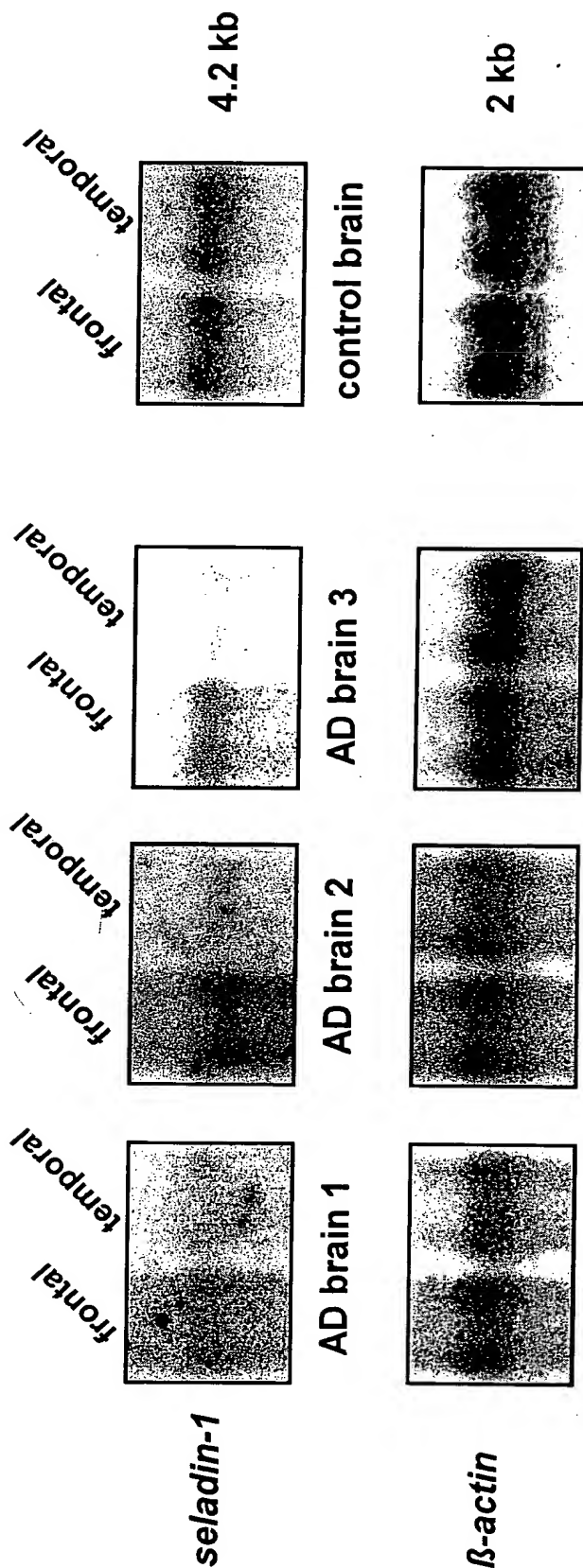


Fig. 17 A

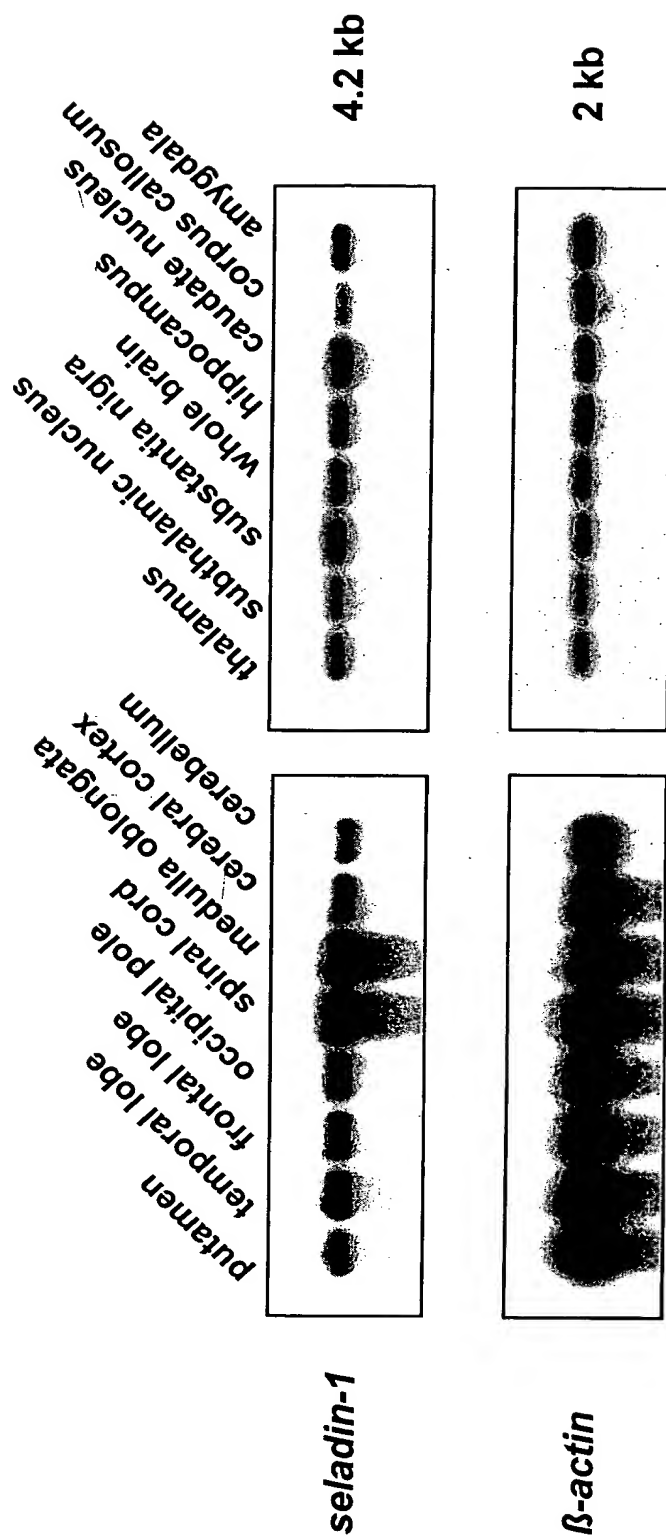


Fig. 17 B

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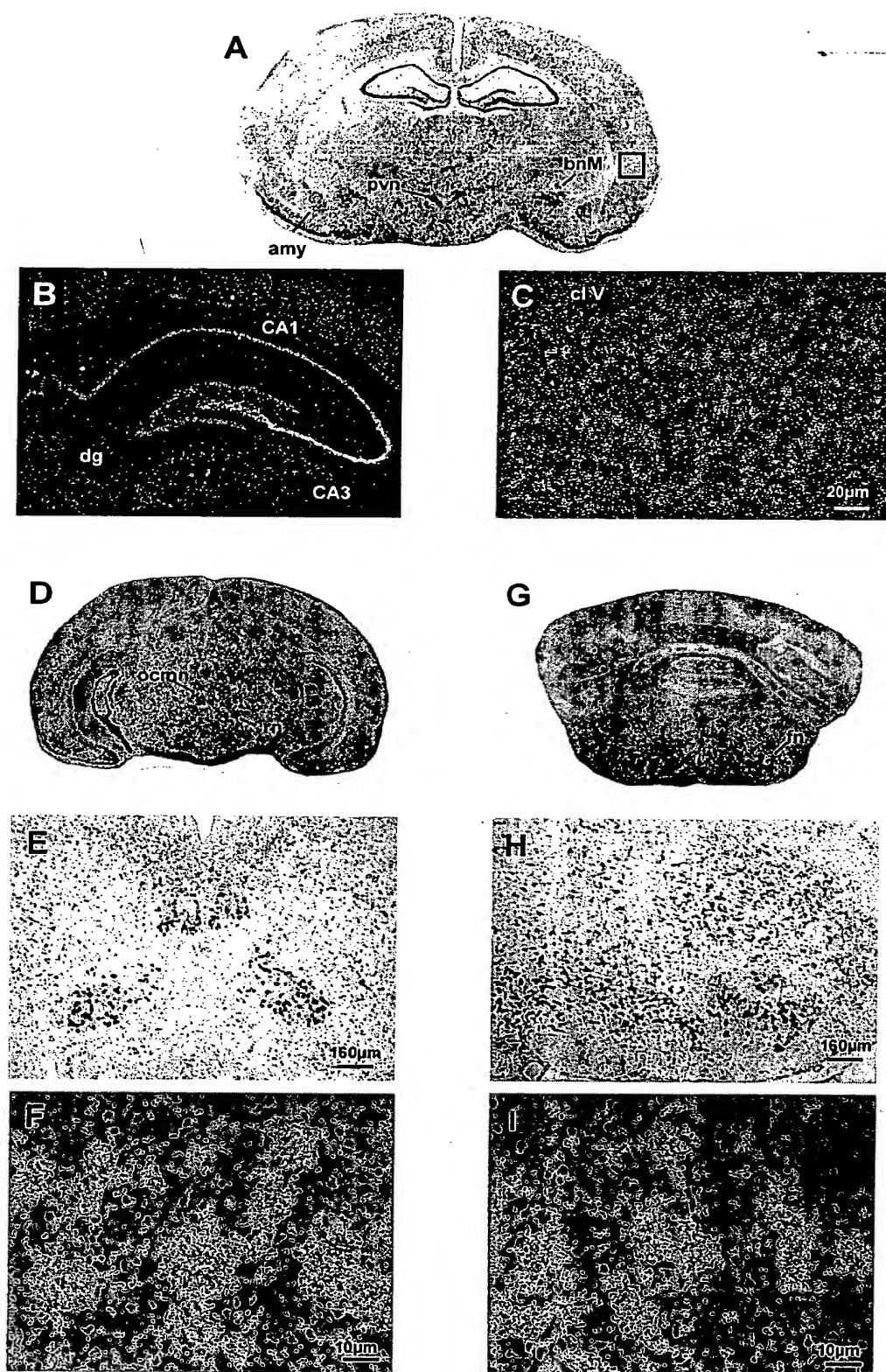


Fig. 18

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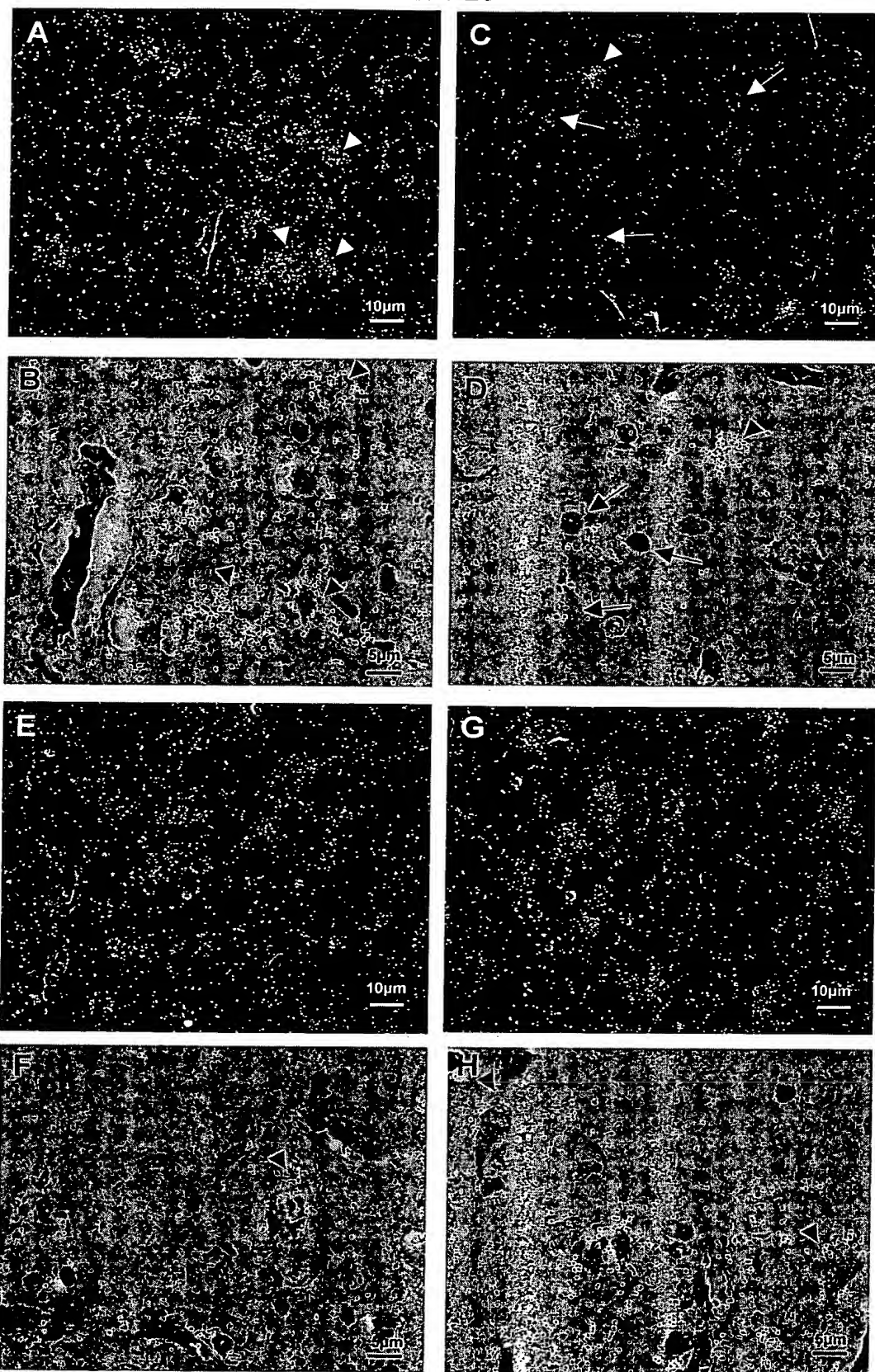
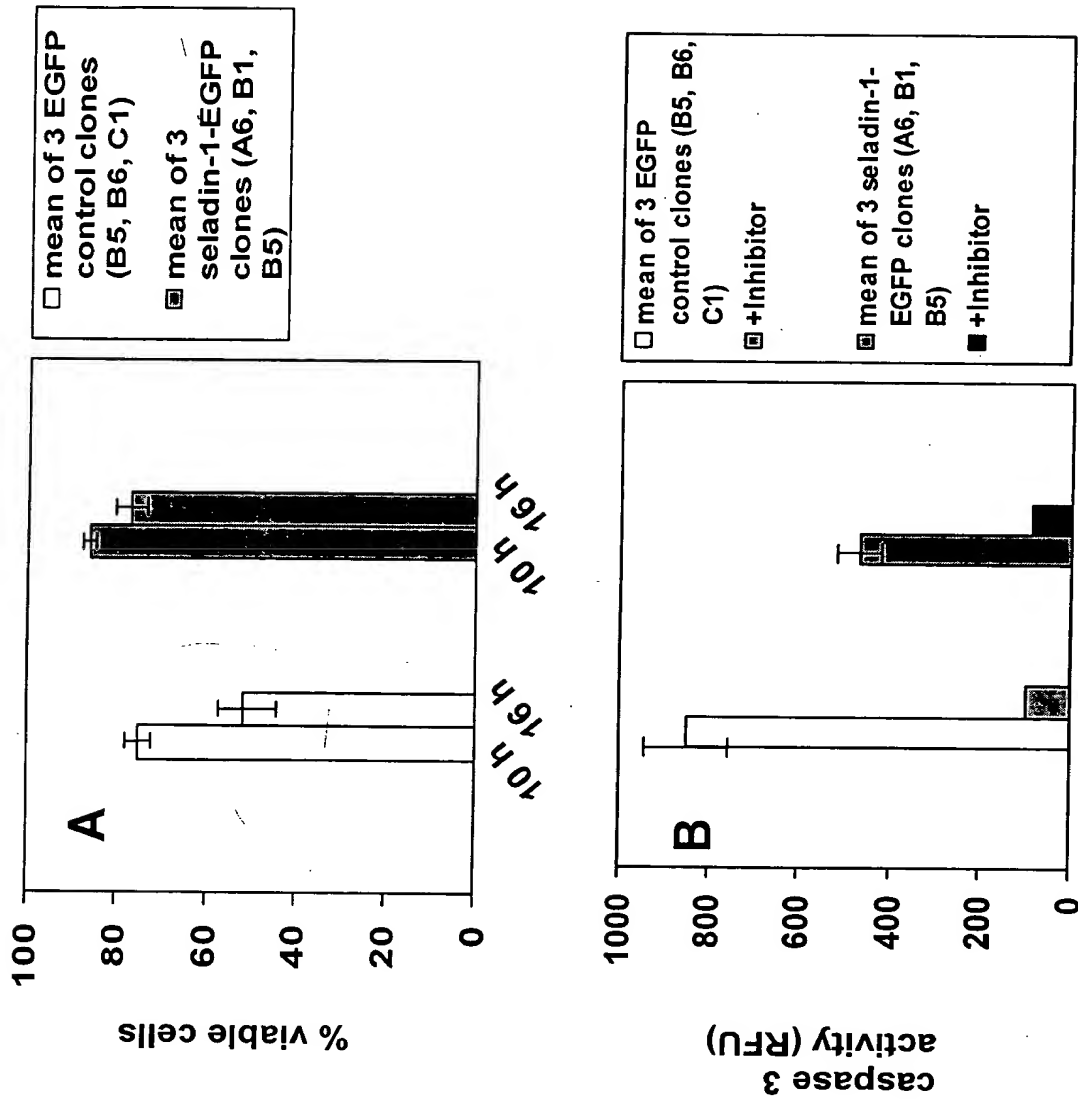


Fig. 19

Fig. 20



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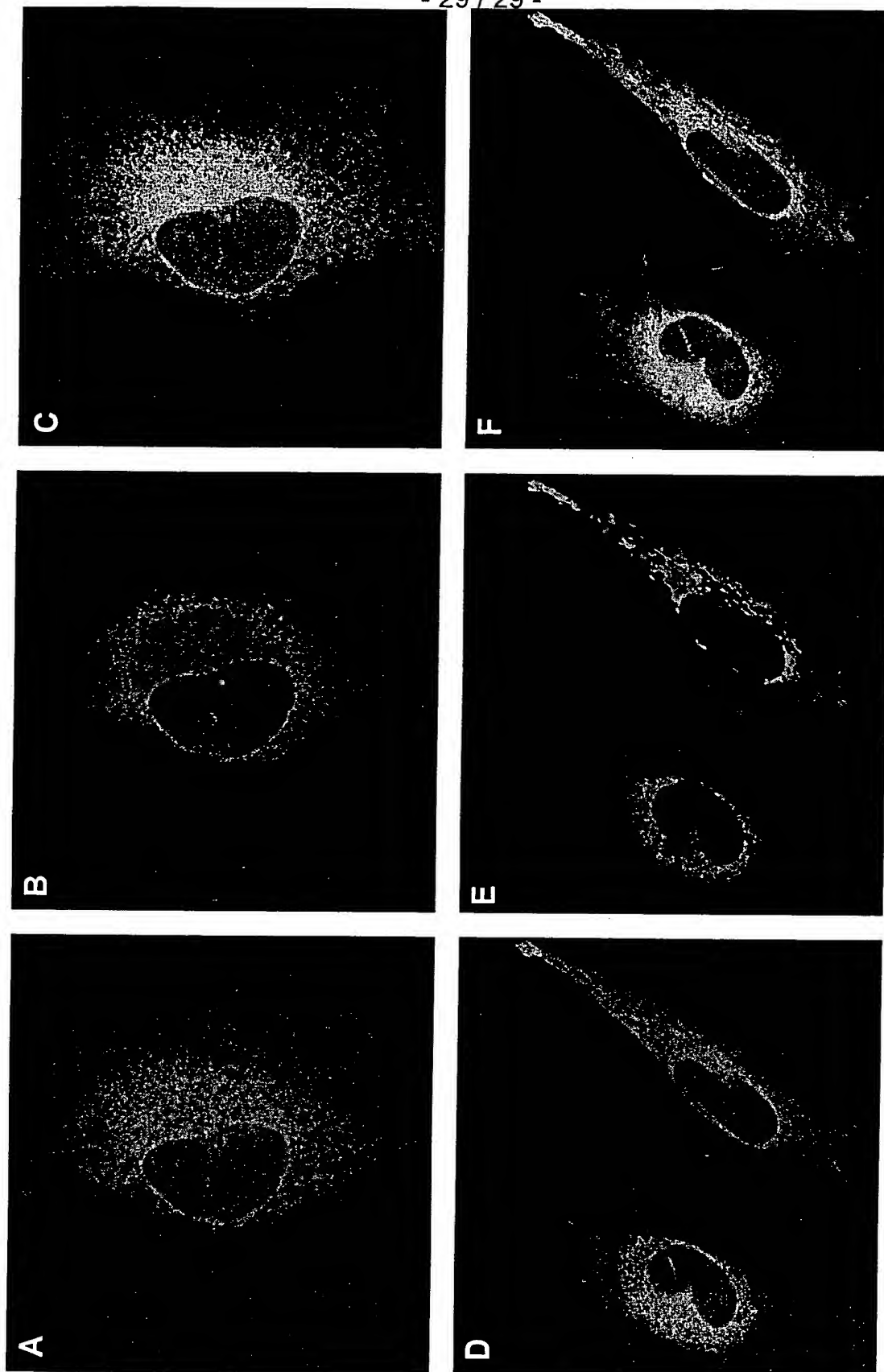


Fig. 21

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